WHAT IS CLAIMED IS:

1. A method for processing signals in an RF subsystem to eliminate the need for a low noise amplifier therein, the method comprising:

providing a plurality of intercoupled micromechanical devices; and

vibrating the micromechanical devices to initially pass a desired frequency range of signals while substantially attenuating signals outside the desired frequency range and then to convert and filter the desired frequency range of signals without the need for the low noise amplifier.

2. The method as claimed in claim 1 wherein the low noise amplifier is an RF low noise amplifier.

3. An RF receiver subsystem which eliminates the need for a low noise amplifier therein, the subsystem comprising:

an image-reject vibrating micromechanical filter for passing a desired frequency range of signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the filter and adapted to be coupled to electronics for converting and filtering the desired frequency range of signals without the need for the low noise amplifier.

4. The subsystem as claimed in claim 3 wherein the low noise amplifier is an RF low noise amplifier.

5. The subsystem as claimed in claim 3 wherein the filter is a relatively wide band filter and the mixer-filter is a narrow band mixer-filter.

6. An RF receiver subsystem which eliminates the need for a low noise amplifier, the subsystem comprising:

a vibrating micromechanical frequency range selector for passing a desired frequency range of signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the selector and adapted to be connected to electronics for converting and filtering the desired frequency range of signals without the need for the low noise amplifier.

7. The subsystem as claimed in claim 6 wherein the low noise amplifier is an RF low noise amplifier.

8. An RF transceiver subsystem which substantially reduces the need for RF front-end power, the subsystem comprising:

a vibrating micromechanical frequency range selector for passing a desired frequency range of signals while substantially attenuating signals outside the desired frequency range; and

a vibrating micromechanical mixer-filter coupled to the selector and adapted to be connected to electronics for converting and filtering signals wherein the need for RF front-end power is substantially reduced.

9. In an RF receiver subsystem, a micromechanical mixer-filter apparatus for converting and filtering an information signal having a frequency without the need for a front end filter, the apparatus comprising:

a mixing micromechanical transducer having a first port for receiving the information signal, a second port for receiving an AC signal having a desired frequency and an output port; and

a micromechanical resonator coupled to the transducer wherein the apparatus converts the frequency of the information signal based on the desired frequency and filters the information signal without the need for a front end filter.

10. The apparatus as claimed in claim 9 wherein the apparatus also adds gain to the information signal.

11. The apparatus as claimed in claim 9 wherein the transducer and the resonator are intercoupled by a non-conductive part to isolate the first and second ports.

12. The apparatus as claimed in claim 9 further comprising means for isolating each of the ports from each of the other ports.

13. The apparatus as claimed in claim 9 wherein the resonator is switchable and tunable.

14. The apparatus as claimed in claim 9 wherein the apparatus is an image-reject mixer filter that initially rejects an image while mixing and then filters.

15. In an RF receiver subsystem, a method for converting and filtering an information signal having a frequency without the need for a front end filter, the method comprising:

providing a micromechanical device having a first port for receiving the information signal, a second port for receiving an AC signal having a desired frequency and an output port; and

vibrating the micromechanical device so that the micromechanical device converts the frequency of the information signal based on the desired frequency and filters the information signal.

16. The method of claim 15 further comprising isolating the first port from the second port.

17. The method of claim 15 further comprising isolating each of the ports from each of the other ports.

18. The method of claim 15 wherein the micromechanical device is vibrated to also add gain to the information signal.

19. The method of claim 15 wherein the device is switchable and tunable.